

Local Hazard Mitigation Plan ANNEX

City of Clayton

Introduction

The City of Clayton is a small city in Contra Costa County, California. The City has a population of 11,000 people, based on the 2000 census¹. The City's total budget for FY 2004-2005 was \$10,342,015, of which its General Fund budget was \$3,222,063. The City employs only 28 people to provide the services of a general law city in California. While the City provides local law enforcement services, area fire services and emergency medical responses are supplied by a separate fire district and a private ambulance company.

The Planning Process

This process of preparing this plan was familiar to the City of Clayton. The City has a Safety Element to its General Plan (last updated in 1995) that includes a discussion of fire, earthquake, flooding, and landslide hazards. In addition, the City routinely enforces the requirements of the California Environmental Quality Act (CEQA) requirements (which, since 1988, have required mitigation for identified natural hazards). The City's effort has focused on building on these pre-existing programs and identifying gaps that may lead to disaster vulnerabilities in order to work on ways to address these risks through mitigation.

Many of the activities conducted by the City were fed into the planning process for the multi-jurisdictional plan. The City participated in various ABAG workshops and meetings, including the general "kick-off" meeting. In addition, the City has provided written and oral comments on the multi-jurisdictional plan. Finally, the City provided information on facilities that are viewed as "critical" to ABAG.

Key City staff met on two occasions to identify and prioritize mitigation strategies appropriate for the City. Staff involved in these meetings included the Community Development Director, Building Official, Assistant to the City Manager, Public Works Director, and Police Chief. At the first meeting, on May 4, 2005, the general priorities and appropriate City departments were identified. The second meeting, held on May 11, 2005, identified preliminary budgets and potential funding sources for strategies designed as "High" priority. The City provided the opportunity for the public to comment on the DRAFT mitigation strategies selected by City staff during a public hearing at the City Council meeting on August 16, 2005. The resolution adopting the plan and strategies was also part of the noticed City Council agenda for August 16, 2005. The mitigation strategies will become an implementation appendix to this Safety Element.

Hazard and Risk Assessment

The ABAG multi-jurisdictional Local Hazard Mitigation Plan, to which this is an Annex, lists nine hazards that impact the Bay Area, five related to earthquakes (faulting, shaking, earthquake-

¹ For complete Census information on this city, see <http://www.bayareacensus.ca.gov/>.

induced landslides, liquefaction, and tsunamis) and four related to weather (flooding, landslides, wildfires, and drought). These hazards also impact this community, except for surface faulting, liquefaction and tsunamis. Surface faulting is not a hazard in the City of Clayton because no active faults are located in the City. While the ABAG Liquefaction Susceptibility Map indicates significant areas within the City as having a Very High Susceptibility to Liquefaction, all of the areas indicated have been developed, primarily with residential housing. As part of the development process, soils investigations were undertaken which indicated that the clayey nature of the soils negated the possibility of liquefaction during a seismic event. Tsunamis are not a hazard because the City does not border the Pacific Ocean or any portion of the San Francisco/Suisun Bay.

While the City has undertaken a number of general hazard mapping activities since the first Safety Element was prepared by the City, some of these maps are less detailed and are not as current, with the exceptions noted in this Annex, as those shown on the ABAG website at <http://quake.abag.ca.gov/mitigation/>.

The ABAG Landslide Hazard Maps (“Summary Distribution of Slides and Earth Flows...” and “Principal Debris-Flow Source Areas...”) indicate that significant areas, primarily in the northeast quadrant of the City, are subject to landslides and debris flows. A large portion of these areas have been developed into residential and golf course uses. During the development of these areas, the vast majority of the existing landslides were repaired and/or stabilized. Of the 539 acres listed in the ABAG Existing Landslide Areas database, it is estimated that less than 50 acres remain in the “Mostly Landslides” category. This acreage is limited to landslides and potential debris flow areas in permanent open space parcels that, if activated, would have little, if any, impact on infrastructure or critical facilities.

The FEMA Flood Hazard Areas Map, based on FEMA’s Flood Insurance Rate Map prepared in 1979, does not represent the most recent version of the FIRM maps for our city, which FEMA revised on September 7, 2001. The current FIRM maps show a much wider Flood Zone A in the center of the city, particularly in the Cardinet Drive area. It is estimated that the area with the 100-yr flood plain has been increased from 75 acres to 85 acres. However, it should be noted that this increase is due, not to any changes in topography or development, but to a FEMA rule change which, theoretically, eliminated protection berms that currently shield an older residential area from overflows of Mt. Diablo Creek. In addition, the ABAG database indicates that some 12 acres of roads are within the 100-year flood zone. A review of the latest FEMA maps indicates that less than 6 acres of roadways are within the flood zone.

Information on disasters declared in Contra Costa County can be found at:
<http://quake.abag.ca.gov/mitigation/disaster-history.html>.

The City examined the hazard exposure of City urban land based on the information on ABAG’s website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html> and as modified above. Of the 2,059 urban acres in the City:

- ◆ Earthquake faulting – no active faults run within the city so rupture of a fault is not a direct or immediate concern.
- ◆ Earthquake shaking – 1 acre is in the highest two categories of shaking potential as the Concord/Green Valley fault runs less than five miles west of the City.

- ◆ Earthquake-induced landslides – the California Geological Survey has not completed mapping of this hazard in the City of Clayton. However, because most urban land areas mapped as landslides have been repaired and/or stabilized during development, this hazard is viewed unlikely except for a post-construction, slow moving landslide that has been discovered in the open space area below Kelok Way.
- ◆ Earthquake liquefaction – there are no areas within the City with moderate, high, or very high liquefaction susceptibility.
- ◆ Tsunamis – are not considered a hazard exposure for the City of Clayton as Clayton is completely landlocked and therefore borders neither the Pacific Ocean nor any portion of the San Francisco/Suisun Bay.
- ◆ Flooding – approximately 85 acres out of a total acreage of 2,059 (4%) are in the 100-year flood plain.
- ◆ Landslides – as explained under earthquake-induced landslides above, there is one landslide, covering approximately two urban acres, that appears to be slowly moving.
- ◆ Wildfires – 254 acres are subject to high or very high wildfire threat and 1,762 acres are in wildland-urban interface threat areas.
- ◆ Dam Inundation – according to ABAG's hazard database, no portion of the City of Clayton is subject to dam inundation.
- ◆ Drought – all 2,059 acres are subject to drought.

The City also examined the hazard exposure of infrastructure based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. Of the 54 miles of roadway in the City,

- ◆ Earthquake faulting – no active faults run within the city so rupture of a fault is not a direct concern.
- ◆ Earthquake shaking – according to ABAG's hazard database, no portion of Clayton's roadways are in the highest two categories of shaking potential.
- ◆ Earthquake-induced landslides – the California Geological Survey has not completed mapping of this hazard in the City of Clayton. As with the urban lands above, most roadway areas mapped as landslides have been repaired and/or stabilized during development, this hazard is viewed unlikely except for a post-construction, slow moving landslide that has been discovered in the open space area below Kelok Way.
- ◆ Earthquake liquefaction – there are no areas within the City with a moderate, high, or very high liquefaction susceptibility.
- ◆ Tsunamis – are not considered a hazard exposure for the City of Clayton as Clayton is completely landlocked and therefore borders neither the Pacific Ocean nor any portion of the San Francisco/Suisun Bay.
- ◆ Flooding – 1 mile of roadway is in the 100-year flood plain.
- ◆ Landslides – less than a ¼ mile of roads are in areas of existing non-repaired or non-stabilized landslides.
- ◆ Wildfires – while four miles of roadway are subject to high or very high wildfire threat, 47 miles of roads are in wildland-urban interface threat areas.
- ◆ Dam Inundation – no portion of the City of Clayton's infrastructure is in an area subject to dam inundation.

- ◆ Drought – is not a hazard for roadways.

Finally, the City examined the hazard exposure of critical health care facilities, schools, and city-owned buildings based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickcrit.html>. Of the critical facilities in the City,

- ◆ Earthquake faulting – no active faults run within the city so rupture of a fault is not a direct concern.
- ◆ Earthquake shaking – according to ABAG's hazard database, no critical facilities are in the highest two categories of shaking potential.
- ◆ Earthquake-induced landslides – the California Geological Survey has not completed mapping of this hazard in the City of Clayton. However, this is unlikely to be an issue because there are no critical facilities in the existing landslide areas.
- ◆ Earthquake liquefaction – there are no areas within the City with a moderate, high, or very high liquefaction susceptibility.
- ◆ Tsunamis – are not considered a hazard exposure for the City of Clayton as Clayton is completely landlocked and therefore borders neither the Pacific Ocean nor any portion of the San Francisco/Suisun Bay.
- ◆ Flooding – no critical health care facilities or schools are in the 100-year flood plain area. However, one City-owned critical facility (Community Library) is located within the 100-year flood plain area.
- ◆ Landslides – no critical health care facilities, schools, or city-owned facilities are in areas of existing landslides.
- ◆ Wildfires – one public school is the only critical facility subject to high or very high wildfire threat but two public schools and six City-owned critical facilities are located within wildland-urban interface threat areas.
- ◆ Dam Inundation – no critical health care facilities, schools, or city-owned facilities are in an area subject to dam inundation.
- ◆ Drought – Drought will not affect city buildings directly. Additionally, the city does not own or operate a water-supply distribution system.

In spite of the areas of the City located in flood-prone areas, there are no repetitive loss properties in the City based on the information at <http://quake.abag.ca.gov/mitigation/pickflood.html>.

There are no unreinforced masonry buildings or soft-story apartments located in the City of Clayton.

Drought, though a potential problem in the City, is not fully assessed. The City will work with ABAG and various water supply agencies on this issue.

The City plans to work with ABAG to develop specific information about the kind and level of damage to buildings, infrastructure, and critical facilities which might result from any of the hazards previously noted. The ABAG Annex states that ABAG will be doing this work in 2005 through early 2006.

As these impacts are not fully developed, the City has reviewed the hazards identified and ranked the hazards based on past disasters and expected future impacts. The conclusion is that

earthquakes (particularly shaking), flooding, wildfire, and landslides (including unstable earth) pose the greatest significant risks for potential loss of lives or property damages.

Mitigation Activities and Priorities

As a participant in the ABAG multi-jurisdictional planning process, City of Clayton staff assisted in the development and review of the comprehensive list of mitigation strategies in the overall multi-jurisdictional plan. The list was discussed at a meeting of the City Police Chief, Building Official, Public Works Director, Community Development Director, and Assistant to the City Manager on May 11, 2005. In addition, representatives of the county fire district and the unified public school district were invited to this meeting, but chose not to attend. At the meeting, all of the mitigation strategies were reviewed. The tentative decision on priority was made based on a variety of criteria, not simply on an economic cost-benefit analysis. These criteria include being technically and administratively feasible, politically acceptable, socially appropriate, legal, economically sound, and not harmful to the environment or our heritage.

Over time, we are committed to developing better hazard and risk information to use in making those trade-offs. We are not trying to create a disaster-proof region, but a disaster-resistant one. In addition, several of the strategies are existing City programs.

These draft priorities were submitted to the City Manager for review. The draft priorities were then provided to the City Council for a public hearing on August 16, 2005. The public was provided with an opportunity to comment on the DRAFT priorities. The final strategies (as shown in the attached Table) will become an *Implementation Appendix* to the City's *Safety Element*.

In this version of the City LHMP, no strategies have been given a High Priority. However, as additional strategies currently classified as Not Yet Considered or Under Study are evaluated, some of these strategies may be reassigned to a High Priority with appropriate cost information.

The Plan Maintenance and Update Process

The City Manager's Office, through the City Engineer's Office, will ensure that **monitoring** of this Annex will occur. The plan will be monitored on an on-going basis. However, the major disasters affecting our community, legal changes, notices from ABAG as the lead agency in this process, and other triggers will be used. Finally, the Annex will be a discussion item on the agenda of the weekly meeting of City department heads at least once a year in April. At that meeting, the City Manager and department heads will focus on **evaluating** the Annex in light of technological and political changes during the past year or other significant events. This group will be responsible for determining if the plan should be updated.

The City of Clayton is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City Engineer will contact ABAG four years after this plan is approved to ensure that ABAG plans to undertake the plan update process. If so, the City again plans to participate in the multi-jurisdictional plan. If ABAG is unwilling or unable to act as the lead agency in the multi-jurisdictional effort, other

agencies will be contacted, including the County's Office of Emergency Services. Cities should then work together to identify another regional forum for developing a multi-jurisdictional plan.

The ***public*** will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the City will provide the opportunity for the public to comment on the updates. A public notice will be posted prior to the meeting to announce the comment period and meeting logistics.